

Patent Claims

1. A system for packaging a flexible web, in particular a textile web, which is positioned in zigzag-form loops, characterized by:
  - a positioning device (1) for forming an arrangement (3) from a web (2) positioned in zigzag form;
  - a transfer device (26, 26a) for transferring the web-loop arrangement (3) directly or indirectly into a packaging container (90);
  - a memory-programmable control device for components of the system.
2. The system as claimed in claim 1, characterized in that the control device is designed for controlling the system fully automatically.
3. The system as claimed in claim 1 or 2, characterized in that the length of the web loops can be adjusted to a different magnitude from one web loop to the next at the control device.
4. The system as claimed in one of claims 1 to 3, characterized in that it is possible to adjust the length of the web for each web-loop arrangement at the control device, it being possible, in the case of multi-arrangement packs, for the overall length of the web of the pack to be distributed preferably uniformly over all the arrangements.
5. The system as claimed in one of claims 1 to 4, characterized in that the positioning device (1) has, in the positioning region, a pressure-exerting bar (12) which extends over the entire loop length, can be advanced perpendicularly to a bearing panel (4) for the web-loop arrangement (3), can be pressed against

the edges of the web loops (2a) of adjustable magnitude and is preferably provided with a controllable drive (20, 22) for raising it up during transfer.

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6. The system as claimed in one of claims 1 to 5, characterized in that the positioning device (1) contains a positioning carriage (6) which can be moved back and forth and has two positioning  
10 rollers (7, 8) which are arranged one beside the other, with axes parallel to one another, and are driven in rotation in the same direction and between which the web (2) can be drawn in from an infeed side (10) and can be folded by the  
15 positioning carriage (6) being moved back and forth perpendicularly to the drawing-in direction (X) of the web, and can be moved on beneath the pressure-exerting bar (12) in a removal direction (X') corresponding to the drawing-in direction  
20 (X).
7. The system as claimed in one of claims 1 to 6, characterized in that the transfer device (26a) has blades (130, 132) which are located downstream  
25 of the positioning device (1), are provided on a displacement bar (124) and are arranged such that they can be moved in between two web loops (2a) from above and moved apart laterally in order to separate two web loops and to transfer the  
30 web-loop arrangement (3) located in front of them.
8. The system as claimed in one of claims 1 to 6, characterized in that the transfer device (26) has preferably finger-like pusher members (28) on the  
35 infeed side of the web (2) in the positioning device (1), it being possible for these pusher members to be moved out of a rest position, in which they do not impede the running of the web, into an operating position, in which they can be

5 moved through beneath the pressure-exerting bar  
(12), parallel to the bearing panel (4) of the  
web-loop arrangement (3), until, on the other side  
of the pressure-exerting bar (12), carry-along  
elements (42) can be moved in between or behind  
the web-loop arrangement from a rest position in  
order for the web-loop arrangement (3) to be  
displaced into a receiving device (24),  
transversely to the loop arrangement, by means of  
10 the carry-along elements.

9. The system as claimed in claim 8, characterized in  
that the pusher members (28) can be lowered  
vertically into the operating position from a  
15 raised rest position above the bearing panel (4).

10. The system as claimed in claim 8, characterized in  
that the carry-along elements (42) are of  
finger-like design and can be moved in between the  
20 pusher members (28) in the vertically downward  
direction from a top rest position.

11. The system as claimed in one of claims 5 to 10,  
characterized in that the bearing panel (4) have  
25 braking strips (56) along the displacement path of  
the folds (2b, 2c) of the web loops (2a), from the  
positioning device (1) into the receiving device  
(24).

30 12. The system as claimed in one of claims 5 to 11,  
characterized in that guide bars (60) which guide  
the web-loop arrangement (3) and are oriented  
transversely to the loop arrangement are arranged  
above the bearing panel (4).

35 13. The system as claimed in one of claims 1 to 12,  
characterized in that at least one resiliently  
yielding stop member (62) is arranged in the  
receiving device (24), in the region between the

folds (2b, 2c), in order for web parts which curve forward in the receiving direction to be oriented parallel to the loop arrangement (2a).

- 5    14. The system as claimed in one of claims 1 to 13, characterized in that the receiving device (24) is designed as a stacking device for the web-loop arrangements (3).
- 10   15. The system as claimed in claim 14, characterized in that the stacking device (24) has a rear wall (64), which serves as a stop for the web-loop arrangements (3) which are to be received, a base (66), which can be lowered by the thickness of the
- 15   web-loop arrangements (3), and a cover (68), which can be adjusted in relation to the base (66) and serves at least as a top guide for a web-loop arrangement (3) which is to be transferred.
- 20   16. The system as claimed in claim 15, characterized in that the cover (68) can be displaced parallel to the base (66) as top boundary of the stack.
- 25   17. The system as claimed in one of claims 1 to 16, characterized in that it has, in the receiving device (24), an accommodating base (82) which can be retracted in the base plane and preferably comprises two base halves (84) which can be retracted laterally in opposite directions.
- 30   18. The system as claimed in one of claims 14 to 17, characterized in that the stacking device (24) can be lowered into a packing station in which the web-loop stack can be ejected out of the stacking
- 35   device (24), by means of an ejecting ram (88), into an associated packaging container (90).
19. A packaging container for the system as claimed in one of claims 1 to 18, characterized in that it

5 has a base (108) with three side walls (110, 112, 114) integrally formed on it, the fourth side, which serves for the introduction of the group of web loops, having a side-wall part (116) which can be swung downward, and a cover (118) being articulated on the opposite side wall, this cover having a border part (120) which at least largely covers the fourth side.